

# **A Three POTS Alternative Direct Distribution**

**August 30, 2007**

**At our August 29, 2007 meeting the Working Group requested another version of an alternative method to calculate the direct distributions.**

**The Working Group asked for a three Pot approach where each pot was distributed on a separate metric to try to capture the various phases of the local government impact life cycle.**

**The three metrics were:**

- The current Severance Taxpayer Employee Residence Report**
- A mining and well permit index**
- An “overall mineral production” index**

**There follows here tables showing the data and how each index is constructed.**

**The prior metrics tables can be found at:**

**[http://dola.colorado.gov/dlg/fa/eiaf/docs/DD\\_Metric\\_slides\\_08\\_29\\_07.pdf](http://dola.colorado.gov/dlg/fa/eiaf/docs/DD_Metric_slides_08_29_07.pdf)**

**POT#1 is the current direct distribution which has an experienced community of stakeholders and is the only metric presented which measures impact at the municipal level of detail.**

**POT#1: Industry Employee Residents Reported**

	Oil&Gas CY2006 \$3,443.74	Coal CY2006 \$481.04	Metals CY2006 \$402.93	Payments per ERR \$ 000		Oil&Gas CY2006	Coal CY2006	Metals CY2006	Payments per ERR \$ 000
<b>Totals</b>	<b>4,552</b>	<b>1,788</b>	<b>397</b>	<b>\$5,565</b>					
Adams	78	0	4	<b>\$90</b>	Kit Carson	5	-	-	<b>\$6</b>
Alamosa	0	0	0	<b>\$0</b>	Lake	1	-	5	<b>\$2</b>
Arapahoe	28	0	3	<b>\$33</b>	La Plata	165	15	-	<b>\$192</b>
Archuleta	4	0	0	<b>\$5</b>	Larimer	50	-	1	<b>\$58</b>
Baca	3	0	0	<b>\$3</b>	Las Animas	251	-	-	<b>\$288</b>
Bent	2	0	0	<b>\$2</b>	Lincoln	4	-	-	<b>\$5</b>
Boulder	17	0	3	<b>\$20</b>	Logan	56	-	-	<b>\$64</b>
Broomfield	4	0	2	<b>\$5</b>	Mesa	1,611	62	1	<b>\$1,859</b>
Chaffee	2	0	2	<b>\$3</b>	Mineral	-	-	-	<b>\$0</b>
Cheyenne	28	0	0	<b>\$32</b>	Moffat	44	519	-	<b>\$134</b>
Clear Creek	0	0	41	<b>\$6</b>	Montezuma	28	11	-	<b>\$34</b>
Conejos	1	0	0	<b>\$1</b>	Montrose	14	70	-	<b>\$27</b>
Costilla	0	0	1	<b>\$0</b>	Morgan	56	-	-	<b>\$64</b>
Crowley	1	0	1	<b>\$1</b>	Otero	1	-	-	<b>\$1</b>
Custer	0	0	0	<b>\$0</b>	Ouray	1	-	1	<b>\$1</b>
Delta	37	811	0	<b>\$173</b>	Park	-	-	12	<b>\$2</b>
Denver	31	0	2	<b>\$36</b>	Phillips	-	-	-	<b>\$0</b>
Dolores	13	0	0	<b>\$15</b>	Pitkin	1	-	1	<b>\$1</b>
Douglas	14	0	3	<b>\$16</b>	Prowers	7	-	-	<b>\$8</b>
Eagle	6	0	0	<b>\$7</b>	Pueblo	6	-	8	<b>\$8</b>
Elbert	4	0	1	<b>\$5</b>	Rio Blanco	262	113	26	<b>\$322</b>
El Paso	17	1	14	<b>\$22</b>	Rio Grande	3	-	1	<b>\$4</b>
Fremont	14	0	73	<b>\$26</b>	Routt	5	165	1	<b>\$32</b>
Garfield	1,091	5	8	<b>\$1,254</b>	Saguache	3	-	-	<b>\$3</b>
Gilpin	0	0	0	<b>\$0</b>	San Juan	-	-	-	<b>\$0</b>
Grand	0	0	18	<b>\$2</b>	San Miguel	-	1	-	<b>\$0</b>
Gunnison	1	12	0	<b>\$3</b>	Sedgwick	-	-	-	<b>\$0</b>
Hinsdale	0	0	5	<b>\$1</b>	Summit	4	-	3	<b>\$5</b>
Huerfano	19	0	0	<b>\$22</b>	Teller	1	-	117	<b>\$17</b>
Jackson	5	1	0	<b>\$6</b>	Washington	7	1	-	<b>\$8</b>
Jefferson	38	0	36	<b>\$48</b>	Weld	404	1	3	<b>\$464</b>
Kiowa	5	0	0	<b>\$6</b>	Yuma	99	-	-	<b>\$114</b>

## POT#2 Combines oil gas and mining permits into an index.

The data is only available at the county level so the funds would be allocated to municipalities on the basis of population.

POT#2: New Mineral Production Permits Index										
	Oil & Gas	Severance	Combined	Payments			Oil & Gas	Severance	Combined	Payments
	Drilling	Taxable	Mineral	Per Mining			Drilling	Taxable	Mineral	Per Mining
	Permits	Mining	Permits	Permits			Permits	Mining	Permits	Permits
	Approved	Permits	Index	Index			Approved	Permits	Index	Index
	5,904	166	11,808	\$5,565						
Adams	37	-	37	\$17	Kit Carson	4	-	4	\$2	
Alamosa	-	-	-	\$0	Lake	-	8	285	\$134	
Arapahoe	11	-	11	\$5	La Plata	235	2	306	\$144	
Archuleta	14	-	14	\$7	Larimer	-	-	-	\$0	
Baca	2	-	2	\$1	Las Animas	500	-	500	\$236	
Bent	8	-	8	\$4	Lincoln	1	-	1	\$0	
Boulder	21	13	483	\$228	Logan	17	-	17	\$8	
Broomfield	1	-	1	\$0	Mesa	265	12	692	\$326	
Chaffee	-	3	107	\$50	Mineral	-	-	-	\$0	
Cheyenne	21	-	21	\$10	Moffat	120	2	191	\$90	
Clear Creek	-	3	107	\$50	Montezuma	5	-	5	\$2	
Conejos	-	4	142	\$67	Montrose	1	21	748	\$352	
Costilla	-	-	-	\$0	Morgan	3	-	3	\$1	
Crowley	-	-	-	\$0	Otero	-	-	-	\$0	
Custer	-	1	36	\$17	Ouray	-	6	213	\$101	
Delta	9	-	9	\$4	Park	-	5	178	\$84	
Denver	19	-	19	\$9	Phillips	12	-	12	\$6	
Dolores	6	-	6	\$3	Pitkin	-	3	107	\$50	
Douglas	-	-	-	\$0	Prowers	7	-	7	\$3	
Eagle	-	3	107	\$50	Pueblo	-	-	-	\$0	
Elbert	4	-	4	\$2	Rio Blanco	360	14	858	\$404	
El Paso	-	-	-	\$0	Rio Grande	-	-	-	\$0	
Fremont	2	10	358	\$169	Routt	9	-	9	\$4	
Garfield	1,845	-	1,845	\$870	Saguache	-	5	178	\$84	
Gilpin	-	2	71	\$34	San Juan	-	7	249	\$117	
Grand	-	1	36	\$17	San Miguel	35	13	497	\$234	
Gunnison	19	8	304	\$143	Sedgwick	7	-	7	\$3	
Hinsdale	-	2	71	\$34	Summit	-	2	71	\$34	
Huerfano	-	-	-	\$0	Teller	-	12	427	\$201	
Jackson	8	2	79	\$37	Washington	69	-	69	\$33	
Jefferson	1	-	1	\$0	Weld	1,418	2	1,489	\$702	
Kiowa	11	-	11	\$5	Yuma	797	-	797	\$376	

# POT#3 combines three mineral production data series into an index.

Without a policy weighting the concentration of coal and metals in a few counties significantly skews the distribution.

## POT#3: Mineral Production Index

	Oil&Gas CY2006 BCF Equivalent 1,566	Coal CY2006 Million tons/Year 35	Metals CY2006 \$M 1,174	Combined Mineral Production Index 4,699	Payments Production Index \$000 \$5,565		Oil&Gas CY2006 BCF Equivalent	Coal CY2006 Million tons/Year	Metals CY2006 \$M	Combined Mineral Production Index	Payments Production Index \$000
Adams	9	-	-	9	\$11	Kit Carson	\$0	\$0	\$0	1	\$1
Alamosa	-	-	-	-	\$0	Lake	\$0	\$0	\$0	0	\$0
Arapahoe	1	-	-	1	\$1	La Plata	\$439	\$0	\$0	546	\$546
Archuleta	4	-	-	4	\$4	Larimer	\$1	\$0	\$0	1	\$1
Baca	3	-	-	3	\$3	Las Animas	\$101	\$0	\$0	119	\$119
Bent	0	-	-	0	\$1	Lincoln	\$1	\$0	\$0	1	\$1
Boulder	3	-	0.0	3	\$4	Logan	\$2	\$0	\$0	2	\$2
Broomfield	1	-	-	1	\$1	Mesa	\$15	\$0	\$0	18	\$18
Chaffee	-	-	-	-	\$0	Mineral	\$0	\$0	\$0	-	\$0
Cheyenne	17	-	-	17	\$21	Moffat	\$21	\$8	\$0	465	\$465
Clear Creek	-	-	782.8	1,045	\$1,237	Montezuma	\$169	\$0	\$0	201	\$201
Conejos	-	-	-	-	\$0	Montrose	\$0	\$0	\$0	22	\$22
Costilla	-	-	-	-	\$0	Morgan	\$1	\$0	\$0	1	\$1
Crowley	-	-	-	-	\$0	Otero	\$0	\$0	\$0	-	\$0
Custer	-	-	-	-	\$0	Ouray	\$0	\$0	\$0	-	\$0
Delta	0	7.0	-	308	\$364	Park	\$0	\$0	\$0	0	\$0
Denver	0	-	-	0	\$0	Phillips	\$1	\$0	\$0	1	\$1
Dolores	13	-	-	13	\$16	Pitkin	\$0	\$0	\$0	-	\$0
Douglas	-	-	-	-	\$0	Prowers	\$1	\$0	\$0	1	\$1
Eagle	-	-	-	-	\$0	Pueblo	\$0	\$0	\$0	-	\$0
Elbert	0	-	-	0	\$1	Rio Blanco	\$78	\$2	\$2	186	\$186
El Paso	-	-	-	-	\$0	Rio Grande	\$0	\$0	\$0	-	\$0
Fremont	0	-	-	0	\$0	Routt	\$1	\$9	\$0	451	\$451
Garfield	346	0.3	-	358	\$424	Saguache	\$0	\$0	\$0	-	\$0
Gilpin	-	-	-	-	\$0	San Juan	\$0	\$0	\$0	-	\$0
Grand	-	-	199.5	266	\$315	San Miguel	\$22	\$0	\$0	26	\$26
Gunnison	1	8.6	-	381	\$451	Sedgwick	\$0	\$0	\$0	0	\$0
Hinsdale	-	-	3.3	4	\$5	Summit	\$0	\$0	\$0	-	\$0
Huerfano	14	-	-	14	\$17	Teller	\$0	\$0	\$185	293	\$293
Jackson	1	-	-	1	\$2	Washington	\$6	\$0	\$0	7	\$7
Jefferson	-	-	-	-	\$0	Weld	\$255	\$0	\$0	302	\$302
Kiowa	2	-	-	2	\$2	Yuma	\$37	\$0	\$0	44	\$44

# The Combined Three Pots result in some shifts from the current pattern.

The use of population for the municipal distributions will significantly increase  
the number of towns which receive payments.

## Combined Payment from Three POTS \$ 000

	Taxpayer Employee Reports	Combined Mineral Permits Index	Combined Mineral Production Index	Total Payments	Current ERR Distribution		Taxpayer Employee Reports	Combined Mineral Permits Index	Combined Mineral Production Index	Total Payments	Current ERR Distribution
	\$5,565	\$5,565	\$5,565	16,696	\$16,696						
Adams	\$90	\$17	\$11	\$118	\$270	Kit Carson	\$6	\$2	\$1	\$8	\$17
Alamosa	\$0	\$0	\$0	\$0	\$0	Lake	\$2	\$134	\$0	\$136	\$5
Arapahoe	\$33	\$5	\$1	\$39	\$98	La Plata	\$192	\$144	\$546	\$882	\$575
Archuleta	\$5	\$7	\$4	\$16	\$14	Larimer	\$58	\$0	\$1	\$59	\$173
Baca	\$3	\$1	\$3	\$7	\$10	Las Animas	\$288	\$236	\$119	\$643	\$864
Bent	\$2	\$4	\$1	\$7	\$7	Lincoln	\$5	\$0	\$1	\$6	\$14
Boulder	\$20	\$228	\$4	\$251	\$60	Logan	\$64	\$8	\$2	\$74	\$193
Broomfield	\$5	\$0	\$1	\$6	\$15	Mesa	\$1,859	\$326	\$18	\$2,203	\$5,578
Chaffee	\$3	\$50	\$0	\$53	\$8	Mineral	\$0	\$0	\$0	\$0	\$0
Cheyenne	\$32	\$10	\$21	\$63	\$96	Moffat	\$134	\$90	\$465	\$689	\$401
Clear Creek	\$6	\$50	\$1,237	\$1,293	\$17	Montezuma	\$34	\$2	\$201	\$237	\$102
Conejos	\$1	\$67	\$0	\$68	\$3	Montrose	\$27	\$352	\$22	\$401	\$82
Costilla	\$0	\$0	\$0	\$0	\$0	Morgan	\$64	\$1	\$1	\$67	\$193
Crowley	\$1	\$0	\$0	\$1	\$4	Otero	\$1	\$0	\$0	\$1	\$3
Custer	\$0	\$17	\$0	\$17	\$0	Ouray	\$1	\$101	\$0	\$102	\$4
Delta	\$173	\$4	\$364	\$541	\$518	Park	\$2	\$84	\$0	\$86	\$5
Denver	\$36	\$9	\$0	\$45	\$108	Phillips	\$0	\$6	\$1	\$6	\$0
Dolores	\$15	\$3	\$16	\$34	\$45	Pitkin	\$1	\$50	\$0	\$52	\$4
Douglas	\$16	\$0	\$0	\$16	\$49	Prowers	\$8	\$3	\$1	\$12	\$24
Eagle	\$7	\$50	\$0	\$57	\$21	Pueblo	\$8	\$0	\$0	\$8	\$24
Elbert	\$5	\$2	\$1	\$7	\$14	Rio Blanco	\$322	\$404	\$186	\$912	\$967
El Paso	\$22	\$0	\$0	\$22	\$65	Rio Grande	\$4	\$0	\$0	\$4	\$11
Fremont	\$26	\$169	\$0	\$195	\$78	Routt	\$32	\$4	\$451	\$487	\$97
Garfield	\$1,254	\$870	\$424	\$2,548	\$3,763	Saguache	\$3	\$84	\$0	\$87	\$10
Gilpin	\$0	\$34	\$0	\$34	\$0	San Juan	\$0	\$117	\$0	\$117	\$0
Grand	\$2	\$17	\$315	\$335	\$7	San Miguel	\$0	\$234	\$26	\$261	\$0
Gunnison	\$3	\$143	\$451	\$597	\$9	Sedgwick	\$0	\$3	\$0	\$3	\$0
Hinsdale	\$1	\$34	\$5	\$39	\$2	Summit	\$5	\$34	\$0	\$39	\$15
Huerfano	\$22	\$0	\$17	\$39	\$65	Teller	\$17	\$201	\$293	\$511	\$51
Jackson	\$6	\$37	\$2	\$45	\$18	Washington	\$8	\$33	\$7	\$48	\$25
Jefferson	\$48	\$0	\$0	\$49	\$145	Weld	\$464	\$702	\$302	\$1,468	\$1,393
Kiowa	\$6	\$5	\$2	\$13	\$17	Yuma	\$114	\$376	\$44	\$533	\$341

## **Construction of each index required some decisions:**

**#1: The Employee Residence data** is designated by mineral type. This then is applied to the severance revenue by type to get a different payment per reported employee for each mineral type. From our conversations I assume the committee wants to maintain this distinction in the payments per employee.

Therefore, we take the 1/3 of the total pot for this metric and further divide it into three mineral type sub pots. Then each is divided by the number of employees reported in that pot to get the separate payments per employee.



## **Construction of each index required some decisions:**

**#2: The mining permits index** does not have a stable "new" time series by county. Instead, it provides a good list of all outstanding active mine permits as a count of permits by county.

To get at what I hope was the Working Groups intent, I took this list of 2033 "outstanding mines permitted" and kept only the 166 mines identified with commodities that are severance taxable.

As with all these indices that combine different units of measure, I created a weighting system that neutralized the units-of-measure. So 5900 well permits is given equal weight to 166 mine permits.

## **Construction of each index required some decisions:**

**#3: The mineral production index** also posed a problem. Without the added permits and Rail/Plant/Pipe components we had used in our previous mineral production index, the high concentration of the value of metals and tons of coal in a few counties skewed the distributions to those counties much more than would seem reasonable.

Therefore, after applying the standard weighting system that neutralized the units-of-measure, we might want to also applied a policy weight that reduced the coal tons by half, and the metals values by 90%. This alternative version is shown in the following table.

# If we apply a policy weighting to the concentrated coal and metals production we get a distribution that looks more equitable.

## Combined Payment from Three POTS \$ 000

	Taxpayer Employee Reports	Combined Mineral Permits Index	Combined Mineral Production Index	Total Payments	Current ERR Distribution		Taxpayer Employee Reports	Combined Mineral Permits Index	Combined Mineral Production Index	Total Payments	Current ERR Distribution
	<b>\$5,565</b>	<b>\$5,565</b>	<b>\$5,565</b>	<b>16,696</b>	<b>\$16,696</b>						
Adams	\$90	\$17	\$20	\$128	\$270	Kit Carson	\$6	\$2	\$1	\$9	\$17
Alamosa	\$0	\$0	\$0	\$0	\$0	Lake	\$2	\$134	\$0	\$136	\$5
Arapahoe	\$33	\$5	\$2	\$39	\$98	La Plata	\$192	\$144	<b>\$999</b>	<b>\$1,335</b>	\$575
Archuleta	\$5	\$7	\$8	\$20	\$14	Larimer	\$58	\$0	\$2	\$60	\$173
Baca	\$3	\$1	\$6	\$10	\$10	Las Animas	<b>\$288</b>	\$236	\$224	\$748	<b>\$864</b>
Bent	\$2	\$4	\$1	\$7	\$7	Lincoln	\$5	\$0	\$1	\$6	\$14
Boulder	\$20	\$228	\$7	\$255	\$60	Logan	\$64	\$8	\$3	\$76	\$193
Broomfield	\$5	\$0	\$2	\$7	\$15	Mesa	<b>\$1,859</b>	\$326	\$33	<b>\$2,219</b>	<b>\$5,578</b>
Chaffee	\$3	\$50	\$0	\$53	\$8	Mineral	\$0	\$0	\$0	\$0	\$0
Cheyenne	\$32	\$10	\$39	\$81	\$96	Moffat	\$134	\$90	<b>\$459</b>	\$683	\$401
Clear Creek	\$6	\$50	\$232	\$288	\$17	Montezuma	\$34	\$2	\$376	\$413	\$102
Conejos	\$1	\$67	\$0	\$68	\$3	Montrose	\$27	<b>\$352</b>	\$20	\$400	\$82
Costilla	\$0	\$0	\$0	\$0	\$0	Morgan	\$64	\$1	\$2	\$68	\$193
Crowley	\$1	\$0	\$0	\$1	\$4	Otero	\$1	\$0	\$0	\$1	\$3
Custer	\$0	\$17	\$0	\$17	\$0	Ouray	\$1	\$101	\$0	\$102	\$4
Delta	\$173	\$4	\$342	\$518	\$518	Park	\$2	\$84	\$0	\$86	\$5
Denver	\$36	\$9	\$1	\$46	\$108	Phillips	\$0	\$6	\$1	\$7	\$0
Dolores	\$15	\$3	\$30	\$47	\$45	Pitkin	\$1	\$50	\$0	\$52	\$4
Douglas	\$16	\$0	\$0	\$16	\$49	Prowers	\$8	\$3	\$2	\$13	\$24
Eagle	\$7	\$50	\$0	\$57	\$21	Pueblo	\$8	\$0	\$0	\$8	\$24
Elbert	\$5	\$2	\$1	\$8	\$14	Rio Blanco	<b>\$322</b>	<b>\$404</b>	\$258	<b>\$985</b>	<b>\$967</b>
El Paso	\$22	\$0	\$0	\$22	\$65	Rio Grande	\$4	\$0	\$0	\$4	\$11
Fremont	\$26	\$169	\$1	\$195	\$78	Routt	\$32	\$4	\$423	\$460	\$97
Garfield	<b>\$1,254</b>	<b>\$870</b>	<b>\$782</b>	<b>\$2,906</b>	<b>\$3,763</b>	Saguache	\$3	\$84	\$0	\$87	\$10
Gilpin	\$0	\$34	\$0	\$34	\$0	San Juan	\$0	\$117	\$0	\$117	\$0
Grand	\$2	\$17	\$59	\$78	\$7	San Miguel	\$0	\$234	\$49	\$284	\$0
Gunnison	\$3	\$143	<b>\$424</b>	\$570	\$9	Sedgwick	\$0	\$3	\$0	\$3	\$0
Hinsdale	\$1	\$34	\$1	\$35	\$2	Summit	\$5	\$34	\$0	\$39	\$15
Huerfano	\$22	\$0	\$31	\$53	\$65	Teller	\$17	\$201	\$55	\$273	\$51
Jackson	\$6	\$37	\$3	\$46	\$18	Washington	\$8	\$33	\$14	\$55	\$25
Jefferson	\$48	\$0	\$0	\$49	\$145	Weld	<b>\$464</b>	<b>\$702</b>	<b>\$565</b>	<b>\$1,732</b>	<b>\$1,393</b>
Kiowa	\$6	\$5	\$4	\$15	\$17	Yuma	\$114	<b>\$376</b>	\$82	\$572	\$341

**All comments and edits appreciated.**

**Send them to my email at:**

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Unless you specify otherwise, I plan to build and share a thread of the comments and discussion so that we can conduct this process of metric refinement before our next meeting.

- Colby